

REMARKS

Claims 1, 2 and 4-9 remain pending. All of the pending claims are rejected for alleged lack of written description. The previous prior art rejections have been withdrawn.

In view of the following remarks, it is believed that all rejections are overcome, and that the present claims are all allowable.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claims 1, 2 and 4-9 are rejected for alleged lack of written description. Specifically, the limitation "fracture rate X ... is 0.045 to 0.094" is said to lack written description support over the entire recited range. In the Office Action at paragraph 7, the Examiner points out that the disclosure contains support at six data points, with the points being clustered around the endpoints of the recited range. At paragraph 8, the Examiner argues that the claims lack adequate written description support over the range of fracture rates of 0.045 to 0.094 because no data points are found in the range between 0.05 and 0.08. The Examiner questions in paragraph 9 whether fracture rates in the range between 0.05 and 0.08 were possible at the time of the

invention, and if they were possible, whether they would exhibit the claimed beneficial properties.

Regarding the Examiner's concern whether fracture rates of glass microspheres were available between 0.05 and 0.08 at the time of the invention, the Examiner has presented neither any technical reason nor any evidence that would support such a contention. Fracture rates are simply the result of manufacturing processes combined with mechanical handling of the material after manufacture. Given that glass microspheres clearly were available with a fracture rate of 0.045, it would have been a routine matter to produce higher fracture rates over the desired range by subjecting the microspheres having a fracture rate of 0.045 to appropriate mechanical disruption and selecting samples with the desired higher fracture rates to fill the gap between 0.05 and 0.08.

The issue of whether glass microspheres having fracture rates between 0.05 and 0.08 would have the desired properties, i.e., the ability to bring about a dielectric constant of 3.0 or less in an injection molded product, is addressed by the attached Declaration of Mr. Yoshiharu Iwasaki. At paragraph 3) Mr. Iwasaki points out that a person of ordinary skill at the time of the invention would have been familiar with a

quantitative relationship between the dielectric constant of a resin composition and the dielectric constants of its constituents. The relationship takes into account the volume fraction that is represented by glass balloons. At paragraph 5) Mr. Iwasaki states that the dielectric constant for an LCP resin containing glass balloons would have been expected to be a monotonically increasing function of the fracture rate of the glass balloons. At paragraph 7, Mr. Iwasaki specifically evaluates Applicants' Graph 1 submitted January 14, 2009, showing the distribution of data points, and concludes that the ordinary skilled person would have expected a continuous relationship over the interval of fracture rates from 0.05 to 0.08, where no data points are present. Mr. Iwasaki also points out that there is no reason to expect any departure from this relationship in the range not represented by data. Finally, at paragraph 8) Mr. Iwasaki concludes that the ordinary skilled person would have assumed that the dielectric constant of a molded LCP product would be less than 3.0 over the entire range of fracture rates from 0.045 to 0.094 as claimed.

Therefore, Applicants believe that the application as filed provides fully adequate support for the claimed range of

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fracture rates. The withdrawal of the rejection is respectfully requested.

The Examiner is encouraged to telephone the undersigned attorney to discuss any matter that would expedite allowance of the present application.

Respectfully submitted,

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